

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for C18**

Silvertip Pipeline Incident
Laurel, Montana

October 21, 2011



SCAT Area Transition Report for C18

Silvertip Pipeline Incident
Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

Prepared by:
ARCADIS G&M of North Carolina, Inc.
11000 Regency Parkway
West Tower, Suite 205
Cary, North Carolina 27518-8518
Tel 919.469.1952
Fax 919.469.5676

Our Ref.:
B0085883.1103

Date:
October 21, 2011

The observations described in this Report were made exclusively under the conditions at the time and subject to the limitations stated therein. It is understood by Client that ARCADIS has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including but not limited to information provided by Client and Client's other contractors. ARCADIS has not independently verified any such information. The conclusions presented in the Report are based solely upon the observations and representations made by others.

1. Executive Summary of Oil Removal Activities	1
1.1 Land Ownership and Access Issues	1
1.2 Cultural, Historic, and Natural Resource Constraints	1
1.3 Summary of Environmental Sampling	1
1.4 Summary of Initial SCAT Surveys	2
1.5 Applicable Compiled Treatment Recommendations	2
1.6 Oil Removal Activities	2
1.7 Pre-Inspection Survey Transmittal	2
1.8 Post-Inspection Survey Transmittal	2
1.9 Summary of Final SCAT Surveys	3
1.10 SCAT Area Conclusions	3

2. Transition Sign-Off Form **4**

Table

Table 1	Environmental Sampling Summary	2
---------	--------------------------------	---

Figures

Figure 1	Aerial Map with Parcel Boundaries
Figure 2	Wildlife Resources
Figure 3	Sample Location Map
Figure 4	Maximum SCAT Observations
Figure 5	Final SCAT Observations

Appendices

A	Sample Detection Summary
B	Initial SCAT Survey Forms and Sketches
C	Pre-Inspection Survey Transmittal
D	Post-Inspection Survey Transmittal
E	Final SCAT Survey Forms and Sketches
F	Completed SCAT Segment Sign-Off Forms

1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area C18, as well as the oil remediation activities completed in this area based on the SCAT Team recommendations. This report also summarizes the environmental samples collected in SCAT Area C18. This report is intended to be read and used in conjunction with the Summary of Assessment and Oil Removal Activities report.

1.1 Land Ownership and Access Issues

Figure 1 provides an aerial map of SCAT Area C18, along with the (a) SCAT Area boundary, (b) parcel boundaries and respective property owners, and (c) access constraints identified during the oil cleanup process. The acreage surveyed in Area C18 is 41.6. There were no access issues for this area.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified within this area that would affect oil removal activities.

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted limited inspections of Area C18 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area C18.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area C18. The analytical results for the samples collected can be accessed through a publicly accessible database on the United States Environmental Protection Agency's (USEPA's) website. The approximate locations of samples collected within Area C18 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Area	Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
C18	EPA	SPSE205_072911	7/29/2011	Sediment	SPSE205	45.874101	-108.347658

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were no exceedances for Area C18.

1.4 Summary of Initial SCAT Surveys

The SCAT teams used systematic evaluation criteria and treatment method tables approved by the National Oceanic and Atmospheric Administration to provide a standard approach for data collection and conducting field surveys. The forms and sketches from the initial SCAT surveys performed along the river bank (water edge) and floodplain within Area C18 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C18.

1.5 Applicable Compiled Treatment Recommendations

The SCAT team developed compiled treatment recommendations (CTRs) providing approved treatment methods (ATMs) for each oiling zone identified during the initial SCAT surveys ([CTR No. 60](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area C18 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment (PPE), plastic, trash, super sacks, wood chips, and contaminated wood.

1.7 Pre-Inspection Survey Transmittal

A Pre-Inspection Survey Transmittal (PIST) was not conducted for this area.

1.8 Post-Inspection Survey Transmittal

A Post-Inspection Survey Transmittal (POST) was not conducted for this area.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area C18 following completion of oil removal activities. The SCAT team performed final surveys of the left and right banks within SCAT Area C18 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the final SCAT surveys performed on the left and right banks within Area C18, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for C18**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for C18

Prepared for:

Unified Command

Date

Unified Command – RP

SCAT Area Transition Report for C18

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for C18**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for C18

Prepared for:

Unified Command

Date

Unified Command – MDEQ



LEGEND

- Wildlife**
- Amphibian Deceased (Collected)
 - Amphibian Live (Collected)
 - Amphibian Live (Uncollected)
 - Bird Deceased (Collected)
 - Bird Live (Collected)
 - Bird Live (Uncollected)
 - Fish Deceased (Collected)
 - Fish Deceased (Uncollected)
 - Mammal Deceased (Collected)
 - Mammal Deceased (Uncollected)
 - Mammal Live (Uncollected)
 - Reptile Deceased (Collected)
 - Reptile Live (Collected)
 - Reptile Live (Uncollected)
 - Crawfish Deceased (Collected)
- Wildlife - Oiling Status**
- Oiled
 - No-visible Oiling
- Bird Nest Sites**
- Bald Eagle Nest
 - Bald Eagle Nest 1/8mi Buffer
 - Heron Rookery
 - Heron Rookery 1/8mi Buffer
 - Osprey Nest
 - Misc. Bird Nest
- Wildlife Priority Sites**
- Wildlife Cleanup Priority Area

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

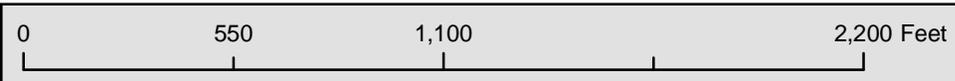
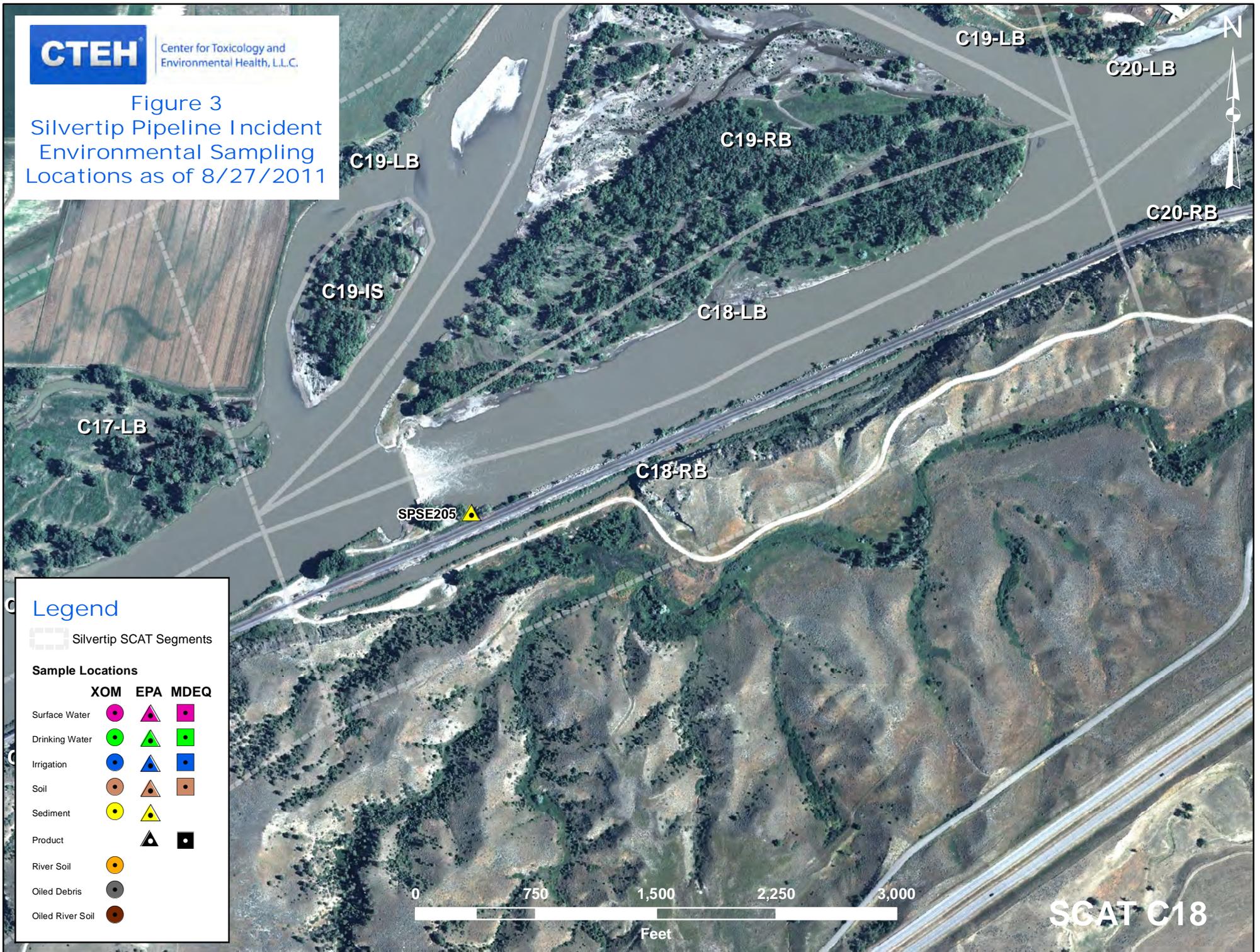


Figure 2
Wildlife Resources



Center for Toxicology and Environmental Health, L.L.C.

Figure 3
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011



Legend

Silvertip SCAT Segments

Sample Locations

	XOM	EPA	MDEQ
Surface Water			
Drinking Water			
Irrigation			
Soil			
Sediment			
Product			
River Soil			
Oiled Debris			
Oiled River Soil			

0 750 1,500 2,250 3,000

Feet

SCAT C18



	9999 Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

Figure 4 - Maximum SCAT Observations For SCAT Area:





	9999 Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

Figure 5 - Final SCAT Observations
For SCAT Area: C18



Appendix A

Sample Detection Summary



Sample Results For
SCAT Area C18

Printed 10/7/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
------------	------	-------------	--------	-------------------	---------	----------	--------	-----------------	------------------	-------	--------

No Detections Reported



Appendix B

Initial SCAT Survey Forms and
Sketches

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>18</u>	<input checked="" type="radio"/> Left Bank <input type="radio"/> Right Bank / Island	<u>27/07/11</u>	<u>917</u> hrs to <u>919</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				<input checked="" type="radio"/> falling - <input type="radio"/> steady - <input type="radio"/> rising
Survey by: <input checked="" type="radio"/> Foot / ATV / <input checked="" type="radio"/> Boat / <input type="radio"/> Helicopter / <input type="radio"/> Overlook / _____		<input checked="" type="radio"/> Sun / <input type="radio"/> Clouds / <input type="radio"/> Fog / <input type="radio"/> Rain / <input type="radio"/> Snow / <input type="radio"/> Windy / <input type="radio"/> Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM # <u>1</u>	Name	Organization	Signature
	<u>Chuck Pons</u>	<u>Cardno ENTRIX</u>	<u>Chm ctm</u>
	<u>Jay Watson</u>	<u>MFWP</u>	
	<u>Ernie McKenzie</u>	<u>US BLM</u>	

3 SEGMENT Total Segment/Reach Length 1175 m Segment/Reach Length Surveyed 880 m

Start GPS: LATITUDE 45 deg. 52'42.17 min. LONGITUDE 108 deg. 20'13.32 min. Datum: WGS87

End GPS: LATITUDE 45 deg. 52'30.43 min. LONGITUDE 108 deg. 20'51.67 min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand P Mixed _____ Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: Wooded Upland:

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: _____

Sloped: (>5°)(15°)(30°) straight _____ braided X oxbow _____ flood plain valley _____ Forested / Vegetated / Bare _____

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m 100m 100m 110 est. water depth: <1m 1-3m 3-10m >10m _____ m

shoal(s) present / N point bar present / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling - same - rising

5 OPERATIONAL FEATURES

Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris: Y / N oiled Y / N amount _____ bags or _____ trucks access restrictions Isolate but near down

Oiled trees/shrubs Y / N River Current strong / N Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

1014
1015
1016

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS						OIL CHARACTER						SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A			X	X	350	2	60			S	P			X							
B			X	X	525	2	0													X	
C			X	X	300	2	60			S	P		Y								

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zones A + C have banks of silt + coated veg (primarily grass)

Veg needs to be cut and/or trimmed and removed

Sketch / No Photos / No Frames _____ Photographer _____



SILVERTIP PIPELINE INCIDENT Yellowstone River Map 34



RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 2

1 GENERAL INFORMATION		Date (dd/mm/yy) 19/08/11	Time (24h): std / daylight 08:40 hrs to 10:10 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: C18 8-10 Left Bank / Right Bank / Island				
Operations Division: C				
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u>26</u> deg C	
2 SURVEY TEAM # <u>103</u>	Name	Organization	Signature	
	Lisa Gerencher	Cardno ENTRIX	<i>[Signature]</i>	
	Joe Busalucci	Cardno ENTRIX	<i>[Signature]</i>	
	Jessica Ross	DEQ	<i>[Signature]</i>	
	Jon Davis	USCG	<i>[Signature]</i>	
	Jeffrey Frank	DEQ	<i>[Signature]</i>	
	Rachelle Thompson	DEQ EPA	<i>[Signature]</i>	

3 SEGMENT Total Segment/Reach Length 1200 m Segment/Reach Length Surveyed 1067 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed X Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: S Wooded Upland: P

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: mixed

Sloped: _____ (>5°)(15°)(30°) straight _____ braided X oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m est. water depth: <1m 1-3m 3-10m >10m _____ m

shoal(s) present Y / N point bar present Y / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling — same — rising

5 OPERATIONAL FEATURES

Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount 3 bags or _____ trucks access restrictions Island is only accessible by boat

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				X	987	250	41			X	(X)						X					veg, debris
B				X	911	180															X	veg, debris
A				X	808	65	41			X	(X)						X					veg, debris
B				X	958	32															X	

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

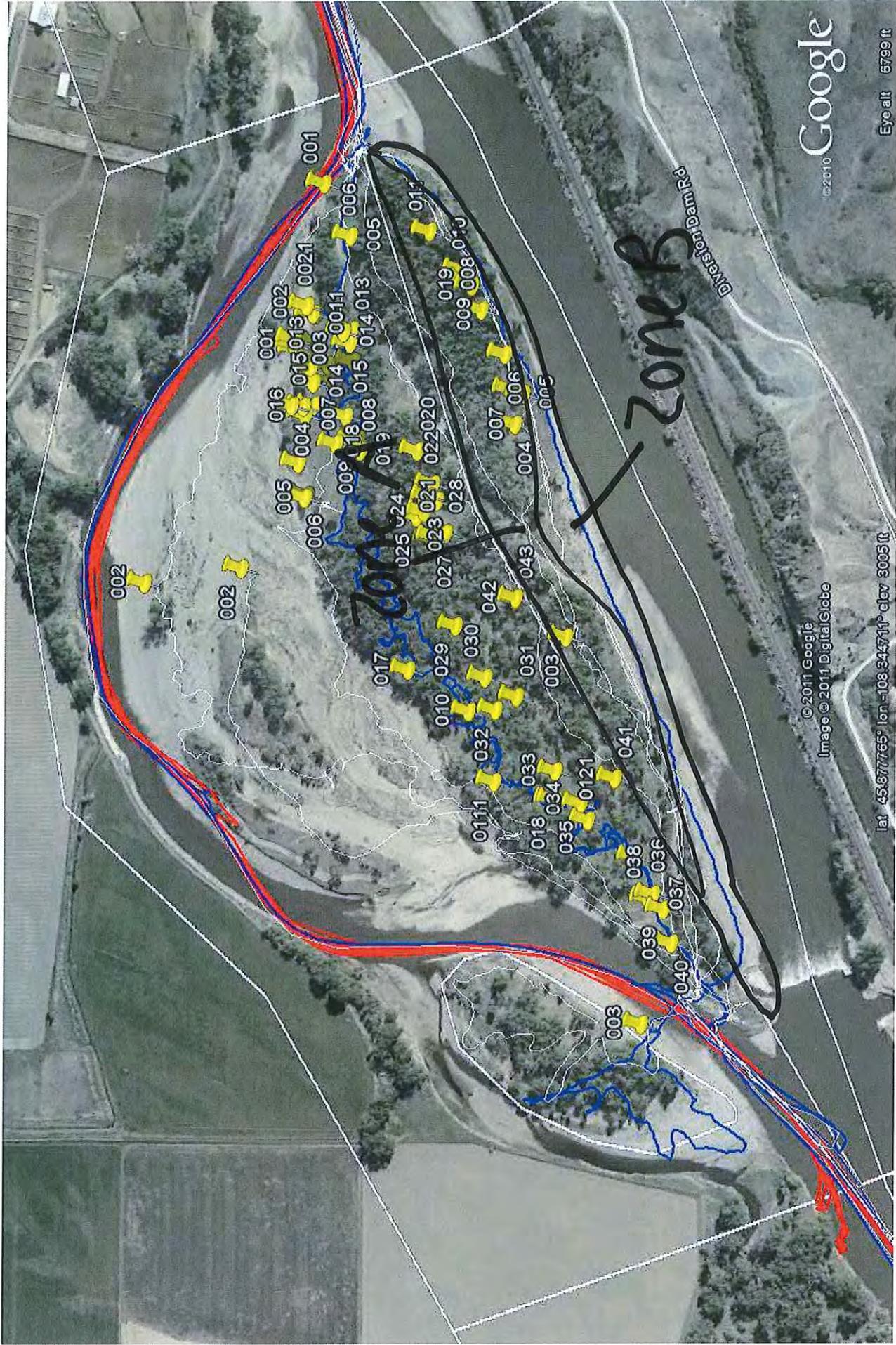
Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zone A. sporadic oiling on vegetation and debris, staining, tar coat, not easily transferable. Hot shot crew recommended. approximate 3 bags anticipated to be generated.

Zone B. no oiling observed. N TR TS

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____

* 1666 is superseded by 1702
* 1667.3 superseded by 1703



CIRI
Team 1 + 3

19/08/11

D13/6/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy) 27/07/11	Time (24h): std / daylight 1145 hrs to 1146 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising <input checked="" type="radio"/> steady - rising
Segment/Reach ID: <u>C18</u> Left Bank / <input checked="" type="radio"/> Right Bank / Island				
Operations Division: <u>C</u>				
Survey by: Foot / ATV / <input checked="" type="radio"/> Boat / Helicopter / Overlook / _____		<input checked="" type="radio"/> Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM #	Name	Organization	Signature
1	Chuck Pons	Cardno ENTRIX	<i>[Signature]</i>
	Joy Watson	MFWP	
	Ernie McKenzie	US BLM	

3 SEGMENT Total Segment/Reach Length 1175 m Segment/Reach Length Surveyed 860 m

Start GPS: LATITUDE 45 deg. 52°39.97 min. LONGITUDE 108 deg. 20°12.92 min. Datum: WGS83

End GPS: LATITUDE 45 deg. 52°29.50 min. LONGITUDE 108 deg. 20°50.37 min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand P Mixed _____ Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: Wooded Upland:

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: S-1/6

Sloped: (>5°)(15°)(30°) straight _____ braided oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m 100m 100m 110 est. water depth: <1m 1-3m 3-10m >10m _____ m

shoal(s) present / N point bar present / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling / same / rising

5 OPERATIONAL FEATURES

Suitable backshore staging / N Access: Direct from backshore / N Alongshore from next segment / N

Debris: Y / oiled Y / N amount _____ bags or _____ trucks access restrictions _____

Oiled trees/shrubs Y / River Current strong / N Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

1013
1018

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS								OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO				
A			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	860	2	0														X	Sand		

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"

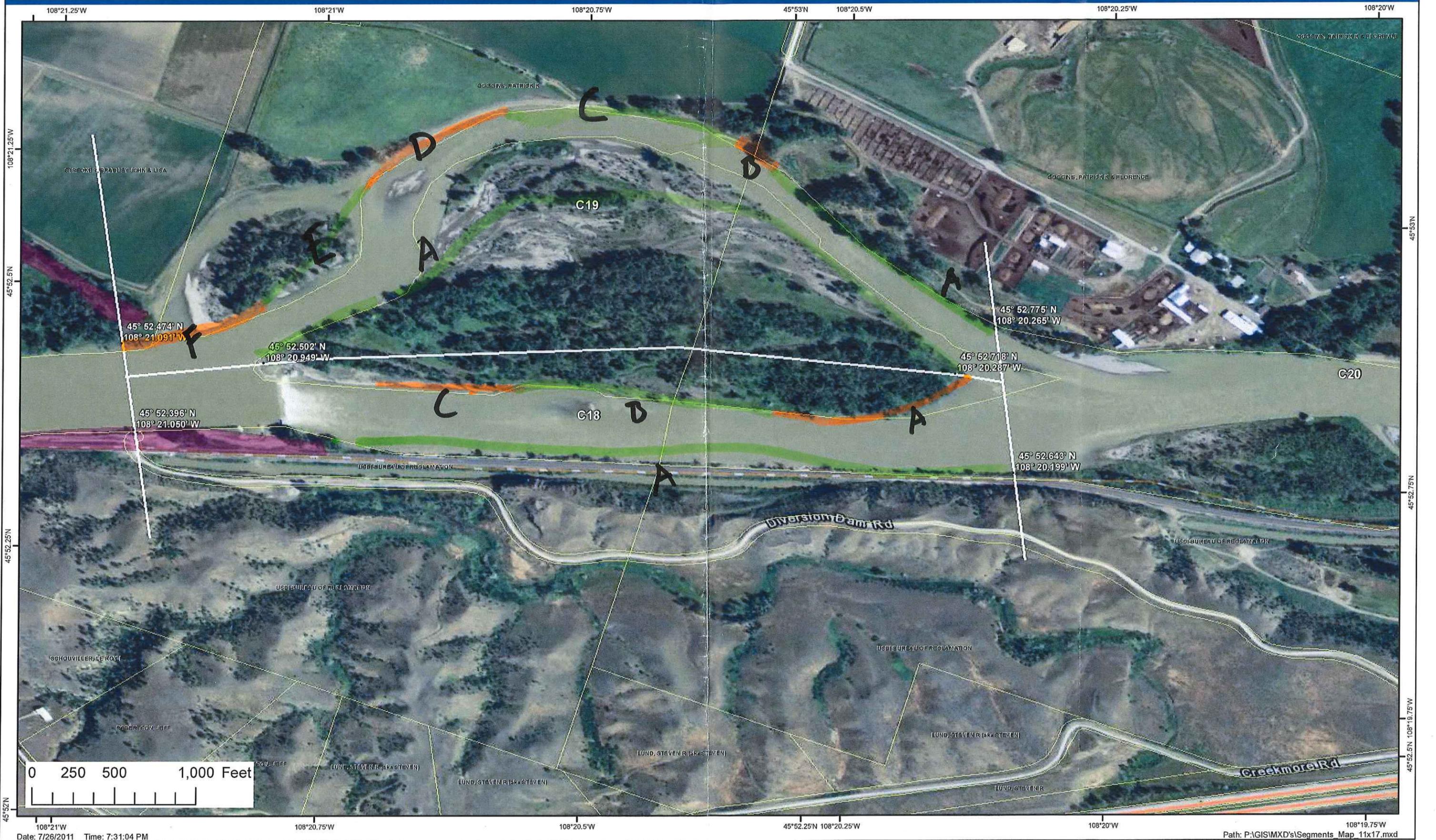
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER								WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR	NO					

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required / N Overbank Survey Completed Y / Shoreline Survey Completed / N

No oil observed.

Sketch / No Photos Yes / / No Frames _____ Photographer _____



RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C18</u>	Left Bank / Right Bank / Island	<u>27/07/11</u>	<u>0900</u> hrs to <u>1230</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>	<u>Sun / Clouds / Fog / Rain / Snow / Windy / Calm</u>			Air Temp + / - <u>29</u> deg C

2 SURVEY TEAM # <u>4</u>	Name	Organization	Signature
	<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>[Signature]</u>
	<u>John Beaton</u>	<u>US EPA</u>	<u>[Signature]</u>
	<u>EARL RADONSKI</u>	<u>MT. FWP</u>	<u>[Signature]</u>
	<u>Loi Williams</u>	<u>Cardno ENTRIX</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 1200 m Segment/Reach Length Surveyed 1200 m

Start GPS: LATITUDE 45 deg. 52.396 min. LONGITUDE 108 deg. 21.050 min. Datum: WGS84

End GPS: LATITUDE 45.87733 deg. 87733 min. LONGITUDE 108.33667 deg. min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp ___ Shelf ___ Manmade: Solid ___ Permeable ___ (type) ___ Wetland: Swamp ___ Bog/Fen ___ Marsh ___

Sediment Bank: Clay/Mud ___ Sand ___ Mixed ___ Pebble/Cobble ___ Boulder P Peat/Organic ___ Vegetated Bank: S Wooded Upland: ___

Sediment Flat: Clay/Mud ___ Sand ___ Mixed/Coarse ___ Other: Rip Rap If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: ___ Est Height 5 m canyon ___ manmade ___ meander S confined or leveed ___ Substrate Type: mud

Sloped: (>5°)(15°)(30°) 760 straight ___ braided P oxbow ___ flood plain valley ___ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m 140 est. water depth: <1m 1-3m 3-10m >10m ___ m

shoal(s) present Y/N ___ point bar present Y/N ___ bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling S same ___ rising

5 OPERATIONAL FEATURES Suitable backshore staging Y/N ___ Access: Direct from backshore Y/N ___ Alongshore from next segment Y/N ___

Debris: Y/N ___ oiled Y/N ___ amount ___ bags or ___ trucks access restrictions Railroad

Oiled trees/shrubs Y/N ___ River Current strong Y/N ___ Other Features: ___

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A			<u>S</u>	<u>P</u>	<u>200</u>	<u>30</u>	<u>0</u>														<u>P</u>	<u>CoS</u>
B			<u>P</u>		<u>60</u>	<u>40</u>	<u>5</u>				<u>P</u>		<u>P</u>									<u>Sand</u>
C			<u>S</u>	<u>P</u>	<u>940</u>	<u>15</u>	<u>0</u>														<u>P</u>	

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER					WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF				

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y/N Overbank Survey Completed Y/N Shoreline Survey Completed Y/N

ZONE A: No oil observed
recommendations: rescut by boat

ZONE B: light distribution of oil stain (banding) on veg in small area
recommendations: cut/trim oiled veg

ZONE C: no oil observed
recommendations: rescut by boat at low speed
lower bank

Sketch Yes/No Photos Yes/No Frames _____ Photographer _____

GOGGINS, PATRICK K & FLORENCE

C19

C18

Zone C

Zone A

DIVERSION DAM RD

USDI BUREAU OF RECLAMATION

LUND, STEVEN R (aka STEVEN)

LUND, STEVEN R

GREEKMORE RD

108°20.75'W

108°20.5'W

108°20.25'W

108°20'W

et



Appendix C

Pre-Inspection Survey Transmittal

**A Pre-Inspection Survey was
not conducted for this area**



Appendix D

Post-Inspection Survey Transmittal

**A Post-Inspection Survey
was not conducted for this area**



Appendix E

Final SCAT Survey Forms and
Sketches

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C18</u> (Left Bank / Right Bank / Island)		<u>22/09/11</u>	<u>1000</u> hrs to <u>1100</u> hrs	<u>low</u> - mean - bankfull - overbank
Operations Division: <u>C</u>				<u>falling</u> - steady - rising
Survey by: <u>Foot</u> / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>32</u> deg C

2 SURVEY TEAM # <u>1</u>	Name	Organization	Signature
	<u>Todd Farrar</u>	<u>Polaris</u>	<u>Todd Farrar</u>
	<u>Sheila McAtee</u>	<u>DNRC</u>	<u>Sheila McAtee</u>

3 SEGMENT Total Segment/Reach Length 1000 m Segment/Reach Length Surveyed 1000 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed _____ Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: P Wooded Upland: _____

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: silt

Sloped: >(5°)(15°)(30°) straight _____ braided P oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m est. water depth: <1m 1-3m 3-10m >10m _____ m

shoal(s) present Y / N point bar present Y / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow est. change over next 7 days: falling - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount 3 bags or _____ trucks access restrictions Island - Boat Access

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

2267

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				<u>X</u>	<u>1000</u>	<u>90</u>	<u>21</u>			<u>S</u>	<u>P</u>						<u>P</u>					<u>WV</u>

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"

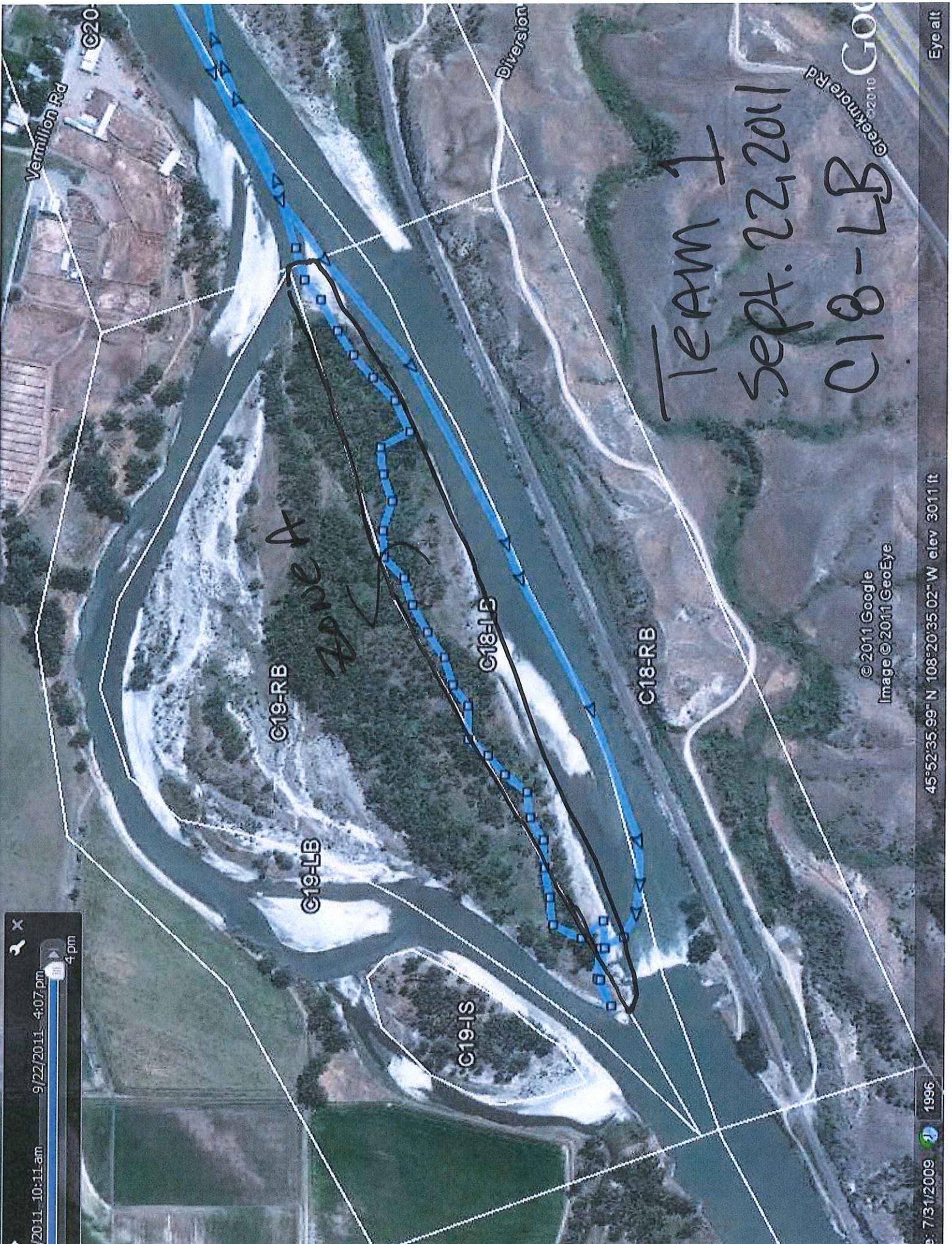
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Sporadic staining with occasional cont on debris & shrubs. We had both a 10 man ops team as well as our hot shot team that removed or treated oiled material. No further treatment Required (NFT)

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____



Zone A

TEAM 1
SEPT. 22, 2011
C18-LB

9/22/2011 10:11 am 9/22/2011 4:07 pm 4 pm

© 2011 Google
Image © 2011 GeoEye

DB/G

1 GENERAL INFORMATION		Date (dd/mm/yy) 05/09/11	Time (24h): std / daylight 1400 hrs to 1630 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>C18</u> Left Bank <input checked="" type="radio"/> Right Bank <input type="radio"/> Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>22</u> deg C
2 SURVEY TEAM # 2	Name	Organization	Signature	
	Pete Lee	Polaris		
	Lee Burroughs	MTFWP		
	Steve Merritt	USEPA		

3 SEGMENT Total Segment/Reach Length 1,200 m Segment/Reach Length Surveyed 1,200 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed X _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P _____ Wooded Upland: S _____

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff Est Height 5 m canyon _____ manmade _____ meander _____ confined or leveed X Substrate Type: _____

Sloped 40 (>5°)(15°)(30°) straight _____ braided X oxbow _____ flood plain valley X Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m m est. water depth: <1m 1-3m >10m _____ m

shoal(s) present Y point bar present Y bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low (mean) / bank full / overbank flow est. change over next 7 days: falling — same — rising

5 OPERATIONAL FEATURES Suitable backshore staging Y Access: Direct from backshore Y Alongshore from next segment Y

Debris Y / N oiled Y / N amount _____ bags or _____ trucks Access restrictions: Railroad

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: Bureau of Reclamation Land

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A			<u>X</u>		<u>1,200</u>	<u>35</u>															<u>X</u>	Grass, trees, debris

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required / N Overbank Survey Completed N Shoreline Survey Completed / N

Oil height:

Treatment recommendations:

Zone A : No oil ; no treatment required

Zone :

Ops Hot Spot (Ed Jessup) removed 1 bag of CT/ST VG resulting in no oil

Sketch Yes / No Photos Yes / No Frames _____ Photographer _____



C18 RB
T2 9/5/11



Appendix F

Completed SCAT Segment Sign-Off
Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment C18-LB Date of Survey Sept. 22, 2011

Dates of Initial SCAT Assessments 27 Jul 2011 (B)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 60

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete¹
Partial Segment Assessment

The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.

This Segment is Conditionally Approved
(See attached Post Inspection Survey Transmittal (POST))

The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).

No Federal Rep Present

Sign Name _____ Print Name/ Affiliation _____ Date _____
Federal Representative (EPA/USCG)

Sheila McAtee *Sheila McAtee / DNRC* *9/22/11*
Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

Todd Farrar *Todd Farrar / Polaris* *9/22/11*
Sign Name _____ Print Name/ Affiliation _____ Date _____
RP Representative (SCAT RP Representative)

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

¹ A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment C18 RB Date of Survey 05/09/11

Dates of Initial SCAT Assessments 27 JUL 11 (DL)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment NA

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete¹
Partial Segment Assessment

The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.

This Segment is Conditionally Approved
(See attached Post Inspection Survey Transmittal (POST))

The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).

[Signature] STEVEN WELLS/EPA 9/5/11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Betsy Hovda DEQ 9/8/11
Sign Name 601 HB Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Andrew Milanes Polaris SCAT Coordinator 9/6/11
Sign Name Print Name/ Affiliation Date
RP Representative (SCAT RP Representative)

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

¹ A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.